SYSTEM OPERATIONAL REQUEST #___ - USFWS/IDFG -2011-1

TO: B. G. John R. McMahon COE-NWD
Jim Barton COE-Water Management
Doug Baus COE-RCC
David Ponganis COE-PDD
Karl Kanbergs COE-NWD-NP-WM-RCC
Col. Bruce A. Estok COE-Seattle District
J. William McDonald USBR-Boise Regional Director
Steven Wright BPA-Administrator
Tony Norris BPA-PGPO-5
Scott Bettin BPA- KEWR-4
Steve Oliver BPA-PG-5
Lori Bodi BPA-KE-4

FROM: Chip Corsi, Regional Supervisor, Idaho Department of Fish and Game (IDFG)
Ben Conard, Field Supervisor, U.S. Fish and Wildlife Service (USFWS)

SUBJECT: Request to implement a 2011-2012 winter lake elevation of 2051' and a 2012-2013 winter lake elevation of 2055' for Lake Pend Oreille, Idaho.

SPECIFICATIONS:
IDFG and USFWS request that the Army Corps of Engineers (COE) draw Lake Pend Oreille down to a winter minimum control elevation (MCE) no lower than 2051' in the winter of 2011-2012 and a winter MCE no lower than 2055' during the winter of 2012-2013. Conduct drawdowns while minimizing or eliminating the need to spill at Albeni Falls Dam. We request that the drawdown be completed by November 8 if reasonably possible. During the past five years, kokanee spawning has commenced around November 8 (earlier than years prior). If this is not possible, the MCE should be reached as soon as possible after November 8 and no later than November 15, and should not be dropped below this elevation for the duration of the winter. During the 2011-2012 drawdown, if kokanee spawning is in progress prior to November 15, and occurs in locations and depths that are deemed vulnerable to continued drawdown, the COE shall, within five days of notification (but not later than November 15), cease drawdown activities even if 2051' has not been reached. IDFG will monitor arrival time of kokanee at shoreline spawning areas and provide timely reports to the federal agencies. These proposed operations are not anticipated to cause exceedance of the state maximum total dissolved gas standards at downstream projects barring unforeseen circumstances. Lake Pend Oreille will then be held within 0.5' above the MCE to the end of kokanee spawning (monitored by IDFG) or December 31, whichever comes first.

JUSTIFICATION:
In Lake Pend Oreille, bull trout are heavily dependent upon kokanee as forage. Without kokanee, the Lake Pend Oreille bull trout population is at risk of becoming severely depressed, threatening recovery efforts in both the Idaho and Montana portions of the Pend Oreille basin. Examples of this negative population interaction include Flathead Lake, Montana and Priest Lake, Idaho. Adult kokanee in Lake Pend Oreille are at low, but increasing, abundance. The estimated number of wild female kokanee expected to spawn this fall is about 86,000 fish. Research indicates three decades of annual deep draw downs during the winter months is the primary contributing factor to the large declines in kokanee abundance observed from the 1970's into the 1990's. More recently, the combined predation effects of lake trout and rainbow trout have limited kokanee recovery, despite improved egg-to-fry survival as a result of the modified winter lake level management. Both populations of predators are being intensively researched, managed, and controlled to reduce their impacts on kokanee abundance, but kokanee recovery efforts will require adequate egg-to-fry survival in addition to reduced predation to be successful.

A decision tree has been developed (included below) to help guide selection of Lake Pend Oreille winter elevation. Data used in the decision tree in 2011 indicates a 2055' MCE for the winter of 2011-2012. The decision tree has been, and should continue to be, a useful tool to arrive at a decision that balances the spawning needs of both kokanee in Lake Pend Oreille and chum salmon below Bonneville Dam. However, circumstances have created a desire by managers to deviate from the decision tree for the next two years. The rationale for this recommendation is as follows:

The Lake Pend Oreille kokanee population was recently on the verge of collapse, with record low abundance in 2007. Management efforts in recent years have attempted to provide every advantage to kokanee to prevent population collapse (winter lake level management, kokanee fishery closure, and predator removal). Kokanee survival has improved dramatically, abundance increases have followed, and while abundance is still low relative to recovery goals, the population is trending upwards and there is lower risk of population collapse. We weighed the benefits of a 2055' MCE this winter (2011-2012) against the benefits an MCE of 2055' could provide the following year. This request to deviate from the decision tree for the next two years is being made to provide the greatest opportunity for achieving recovery goals in a more timely fashion.

While spawner abundance is the highest it has been since 2005, it is only 16,000 fish above the 70,000 fish threshold identified in the decision tree, and we anticipate a larger spawning population in 2012. An MCE of 2055' in winter 2012-2013 providing the best spawning conditions for this anticipated larger spawning population should contribute to achieving recovery goals sooner and help rebuild the weak cohort produced with the record low abundance in 2007.

Another factor strongly influencing our recommendation to deviate from the decision tree relates to a study of kokanee spawning ecology. A graduate project through the University of Idaho was developed to provide a better understanding of the role lake level management plays in kokanee egg-to-fry survival. A major component of this study involves incubating kokanee eggs in a variety of substrate types and lake depths, including elevations between 2051' and 2055'. Field work will begin this year, but most of the lakeshore incubation work will occur during the winter of 2012-2013 and will require a 2055' MCE to evaluate all elevations influenced by lake level management. Accommodating this study is important because information gained should help guide future Lake Pend Oreille water management decisions.

For these reasons, we recommend drafting Lake Pend Oreille to elevation 2051' during the winter of 2011-2012 and to elevation 2055' during the winter of 2012-2013. In both years, the spawning elevation should be maintained as the minimum through kokanee emergence.

Table 1. Decision Tree to guide selection of the winter lake level for Lake Pend Oreille.